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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/872,659	06/10/97	NAGY S	016199/1110

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EXAMINER	
RABAGO,R	
ART UNIT	**PAPER NUMBER**
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 21

Application Number: 08/872,659
Filing Date: June 10, 1997
Appellant(s): Nagy et al.

William G. Conger
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed October 16, 2000.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement that no amendments were after final rejection is correct regarding the final rejection mailed 4/6/2000. However, the amendment filed on 9/17/99 after the final rejection mailed 5/12/99 has been entered because the finality of that rejection was withdrawn in view of a new ground of rejection having been applied. This issue appears to have resulted in appellant's version of the claims being substantially incorrect, as noted below.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims stand or fall together.

(8) Claims Appealed

Claims 22-28, 31, 37-42, 45, 46, 48, 49, 53, 57 and 63 contain(s) substantial errors as presented in the Appendix to the brief, apparently because appellant has failed to properly include the full content of the amendment filed 9/17/99, wherein the dependency of numerous claims was amended to correspond claims 71-73 newly presented in that amendment. Accordingly, a full set of correctly written claims is presented in the Appendix to the examiner's answer. Appellant is further advised that the sentence fragment following claim 73 (as presented in the amendment filed 9/17/99), beginning "with the proviso" is not part of claim 73 because it occurs outside the bounds of the claim.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,852,146	REICHLE	12-1998

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 22-35, 37-51, and 53-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over REICHLE.

The reference discloses organometallic compounds used as catalysts for the polymerization of olefins (col. 1-3), and a substantial portion of the disclosed compounds are within the scope of the instant claims. The genus of catalyst structures of the instant claims is

substantially coextensive with the reference genus of unbridged ligand structures, and one of ordinary skill in the art would be motivated to use the full scope of the unbridged compounds as taught in REICHLE because the patentee has suggested that a useful polymerization process would result, with reasonable success expected.

A comment regarding the examples from REICHLE is in order. Absent the parent application (hereinafter *Nagy I*), the reference would have been applied under 35 USC 102(e) because the examples show embodiments within the claimed scope. However, as these same embodiments were disclosed in *Nagy I*, it would appear that applicant has established priority to those species. As was noted in the rejection of these claims over REICHLE in the Office action of 10/7/99, the filing date of REICHLE predates that of the instant CIP application (hereinafter *Nagy II*), and that *Nagy I* predates REICHLE. Therefore, the instant claims are entitled to the filing date of the CIP parent application only with respect to subject matter which was disclosed in the parent. Accordingly, REICHLE qualifies as prior art for the subject matter of the instant claims which was not disclosed in *Nagy I*. As none of the current claims are limited to subject matter which was either fully supported by the parent disclosure or not suggested in REICHLE, all of the claims are properly rejected under 35 USC 103 as obvious over REICHLE.

(11) Response to Argument

Applicant has not traversed the content of the rejection. Rather, two grounds of traversal have been advanced in the Appeal brief which attempt to disqualify REICHLE as a reference against the instant claims.

Response to Issue A. In this ground of traversal, appellant asserts that REICHLE is not prior art because its issue date is subsequent to the filing date of *Nagy II*. Herein, appellant is challenging the practice of applying a US Patent document as of its filing date in a rejection under 35 USC 102(e), or, as in the instant case, under 35 USC 102(e) through 35 USC 103(a). This argument is baseless. A US patent reference is effective prior art as of its US filing date (MPEP 2136.02 - 2136.03).

Response to Issue B. Appellant alleges conception and reduction to practice of the claimed invention prior to the filing date of REICHLE, and further indicates a belief that the specification and original declaration as contained in *Nagy I* are sufficient to provide the element of proof equivalent to a separately filed declaration under 37 CFR 1.131.

For subject matter which is disclosed in a parent application, appellant's statement asserting that no new declaration is required to establish prior inventorship is not contested. In this case, however, *Nagy II* contains additional disclosure which is not supported in *Nagy I*. The additional subject matter would have been objected to as new matter had it been presented in *Nagy I* after its filing date. Further, appellant has acknowledged that *Nagy II* may not be entitled to the filing date of *Nagy I* under 35 USC 120 (see Brief at pg. 6, paragraph 1).

Therefore, since appellant has not presented even a scintilla of real evidence that the additional subject matter of *Nagy II* was invented or reduced to practice prior to the effective date of REICHLE, appellant's assertion of prior invention is unsupported.

Appellant places great emphasis on the decision of *In re Clarke* (148 USPQ 665), and asserts that the disclosure of *Nagy I* is sufficient to encompass the additional subject matter of *Nagy II* for the purpose of proving prior invention. However, Clarke states:

> It follows from the above views that antedating affidavits must contain facts showing a completion of "the invention" commensurate with the extent the invention is shown in the reference, whether or not it be a showing of the identical disclosure of the reference.

In this case, appellant's showing (i.e., *Nagy I*) is clearly not commensurate in scope with the disclosure of the reference. For example, the scope of transition metals and respective oxidation states is limited in *Nagy I* to titanium, zirconium and hafnium in the +4 state (col. 2, lines 15-37). There is no disclosure or even the slightest hint that appellant envisaged the use of the specified ligands in complexes comprising other transition metals, or even in group IV metals of lower oxidation states. However, REICHLE clearly and repeatedly states that such embodiments are within the scope of the invention (note: col. 2, lines 23-26; col. 3, lines 21-30).

Appellant further asserts that the *Nagy I* application is sufficient to establish prior inventorship because the additional subject matter of *Nagy II* would be obvious over *Nagy I* (further relying on Clarke). However, even if Clarke could be applied in this case, appellant

has offered no evidence or argument which would indicate obviousness of any of the additional disclosure of *Nagy II* over *Nagy I*; in fact, appellant has provided lengthy and strenuous argument to the contrary (see pp. 14-16 of the response filed 2/22/99, especially pg. 16, lines 9-26). Although obviousness of the additional embodiments was asserted in the Office action mailed 8/21/98 (see item 9 therein), this argument was dropped following appellant's remarks in the response filed 2/22/99 (as noted above) because appellant's argument of non-obviousness was accepted.

In sum, all of the claims under appeal include subject matter which was not described in the parent application, but which was described in REICHLE. As appellants have neither traversed the content of the rejection nor produced any reasonable showing which would disqualify the reference, the rejection is sound.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Rob Rabago
January 2, 2001

An appeal conference took place on December 27, 2000, with the unanimous decision to forward this application to the Board for consideration of the appeal. Conferees present:

SPE David Wu

SPE James Seidleck

Jonathan L. Schuchardt
Lyondell Chemical Company
3801 West Chester Pike
Newtown Square, PA 19073

Appendix

22. The catalyst of claim ~~21~~ 71, wherein the sum a+b≤2 when the oxidation state of M is 4 or less and a+b≤3 when the oxidation state of M is greater than 4.

23. The catalyst of claim ~~21~~ 71, wherein Y is -O-.

24. The catalyst of claim ~~21~~ 71, wherein X is halogen.

25. The catalyst of claim ~~21~~ 71, wherein X is Cl.

26. The catalyst of claim ~~21~~ 71, wherein M is a Group 3 to 7 metal.

27. The catalyst of claim ~~21~~ 71, wherein M is a Group 4, 5, or 6 metal.

28. The catalyst of claim ~~21~~ 71, wherein M is titanium, zirconium, or hafnium.

29. The catalyst of claim 23, wherein M is titanium, zirconium, or hafnium.

30. The catalyst of claim 25, wherein M is titanium, zirconium, or hafnium.

31. A catalyst composition useful for the polymerization of olefins, comprising a catalyst of claim ~~21~~ 71 and an activating co-catalyst.

a3 32. The catalyst composition of claim 31, wherein said co-catalyst comprises an alumoxane or an aluminum alkyl.

33. The catalyst composition of claim 32, wherein said alumoxane comprises (poly)methylalumoxane, ethylalumoxane, or diisobutylalumoxane.

34. The catalyst composition of claim 31, wherein said co-catalyst is an acid salt containing a non-coordinating inert anion.

35. The catalyst composition of claim 31, wherein said catalyst is a catalyst in which M is Ti, Zr, or Hf; X is halogen; and Y is oxygen.

37. The catalyst composition of claim 72, wherein Y is -O-.

38. The catalyst composition of claim 72, wherein X is halogen.

39. The catalyst composition of claim 72, wherein X is C1.

Q3

40. The catalyst composition of claim 72, wherein M is a Group 3 to 7 metal.

41. The catalyst composition of claim 72, wherein M is a Group 4, 5, or 6 metal.

42. The catalyst composition of claim 72, wherein M is titanium, zirconium, or hafnium.

43. The catalyst composition of claim 37, wherein M is titanium, zirconium, or hafnium.

44. The catalyst composition of claim 39, wherein M is titanium, zirconium, or hafnium.

45. The catalyst composition of claim 72, wherein M is Ti, Y is -O-, X is C1, and L is C_{7-20} aralkyl.

46. The catalyst composition of claim 72, wherein said co-catalyst comprises an alumoxane or an aluminum alkyl.

47. The catalyst composition of claim 46, wherein said alumoxane comprises (poly)methylalumoxane, ethylalumoxane, or diisobutylalumoxane.

48. The catalyst composition of claim 72, wherein said co-catalyst is an acid salt containing a non-coordinating inert anion.

49. The catalyst composition of claim ~~36~~ 72, wherein said catalyst is a catalyst in which M is Ti, Zr, or Hf; X is halogen; and Y is oxygen.

A3

50. The catalyst composition of claim 45, wherein said co-catalyst comprises an alumoxane or an aluminum alkyl.

51. The catalyst composition of claim 45, wherein said co-catalyst is an acid salt containing a non-coordinating inert anion.

53. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst of claim ~~21~~ 71.

A3

54. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst of claim 23.

55. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst of claim 25.

56. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst of claim 27.

57. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst of claim ~~52~~ 73.

A-3

58. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 31.

59. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 32.

A3

60. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 33.

61. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 34.

62. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 35.

63. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim ~~36~~ 72.

64. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 37.

65. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 39.

A3

66. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 41.

67. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 44.

68. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 45.

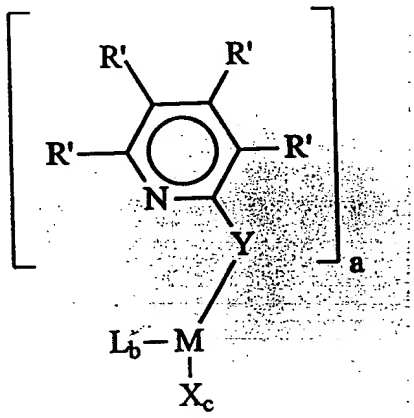
69. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 46.

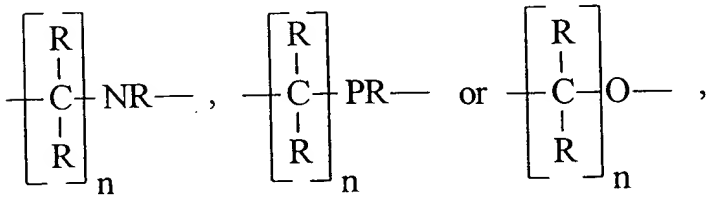
70. In a process for the polymerization of olefins in the presence of an olefin polymerization catalyst, the improvement comprising:

selecting as said olefin polymerization catalyst an olefin polymerization catalyst comprising the catalyst composition of claim 47.

71. (New) A catalyst comprising units of the formula:



where Y is -O-, -S-,  , -P-,



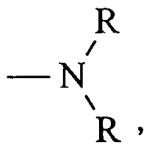
where each R is independently hydrogen, C_{1-6} alkyl, or C_{6-14} aryl;

where each R' is independently R, C_{1-6} alkoxy, C_{7-20} alkaryl, C_{7-20} aralkyl, halogen, or CF_3;

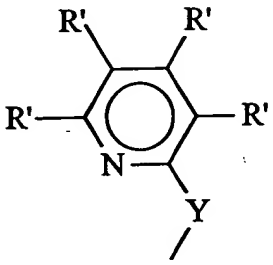
A-6

where M is a Group 3 to 10 metal;

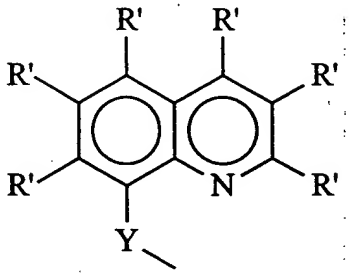
where each X is independently halogen, C_{1-6} alkyl, C_{6-14} aryl, C_{7-20} alkaryl, C_{7-20} aralkyl, C_{1-6} alkoxy, or



L is X, cyclopentadienyl, C_{1-6} alkyl-substituted cyclopentadienyl, fluorenyl, indenyl, or



or



where n is an integer from 1 to 4;

a is an integer from 1 to 3;

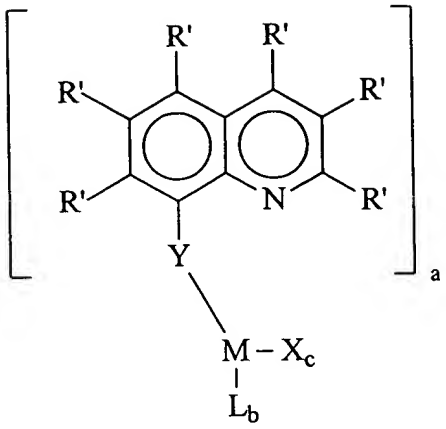
b is an integer from 0 to 2;

the sum of $a+b \leq 3$;

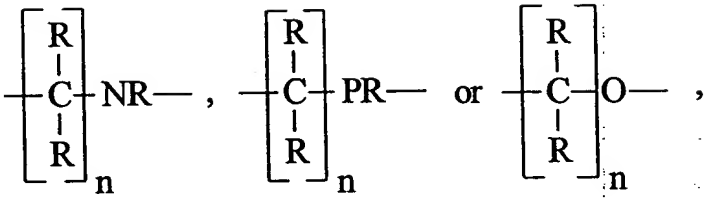
c is an integer from 1 to 6; and

the sum $a+b+c$ equals the oxidation state of M.

72. (New) A catalyst composition suitable for the polymerization of olefins, comprising an activating co-catalyst and a catalyst of the formula:



where Y is -O-, -S-, -N-, -P-,

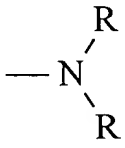


where each R is independently hydrogen, C_{1-6} alkyl, or C_{6-14} aryl;

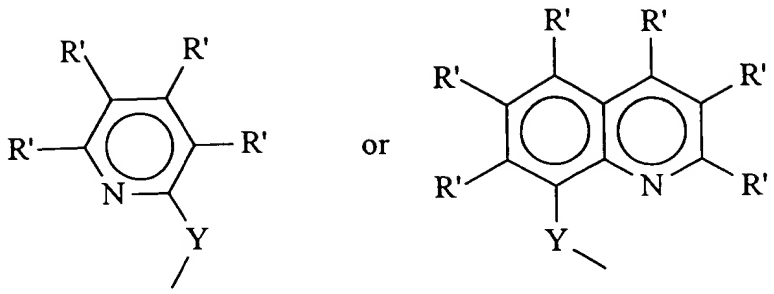
where each R' is independently R, C_{1-6} alkoxy, C_{7-20} alkaryl, C_{7-20} aralkyl, halogen, or CF_3;

where M is a Group 3 to 10 metal;

where each X is independently halogen, C_{1-6} alkyl, C_{6-14} aryl, C_{7-20} alkaryl, C_{7-20} aralkyl, C_{1-6} alkoxy, or



L is X, cyclopentadienyl, C_{1-6} alkyl-substituted cyclopentadienyl, fluorenyl, indenyl,



where n is an integer from 1 to 4;

a is an integer from 1 to 3;

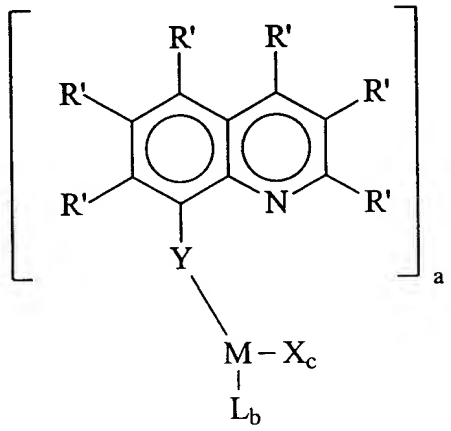
b is an integer from 0 to 2;

the sum of a+b≤3;

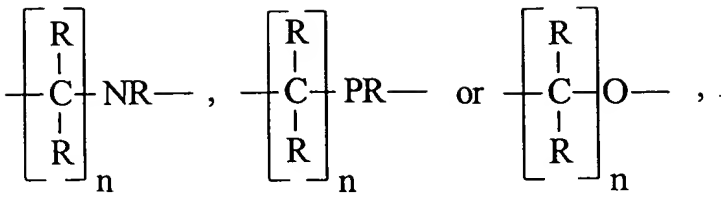
c is an integer from 1 to 6; and

the sum a+b+c equals the oxidation state of M.

73. (New) A catalyst comprising units of the formula:



where Y is -O-, -S-, -N-, -P-,

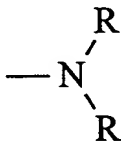


where each R is independently hydrogen, C_{1-6} alkyl, or C_{6-14} aryl;

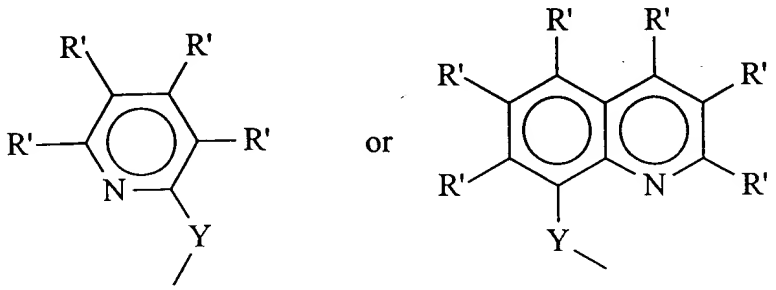
where each R' is independently R, C_{1-6} alkoxy, C_{7-20} alkaryl, C_{7-20} aralkyl, halogen, or CF_3;

where M is a Group 3 to 10 metal;

where each X is independently halogen, C_{1-6} alkyl, C_{6-14} aryl, C_{7-20} alkaryl, C_{7-20} aralkyl, C_{1-6} alkoxy, or



L is X, cyclopentadienyl, C_{1-6} alkyl-substituted cyclopentadienyl, fluorenyl, indenyl,



where n is an integer from 1 to 4;

a is an integer from 1 to 3;

b is an integer from 0 to 2;

the sum of $a+b \leq 3$;

c is an integer from 1 to 6; and

the sum a+b+c equals the oxidation state of M.